



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,694	11/24/2003	Akira Oosawa	Q78578	3220

23373 7590 10/16/2007  
SUGHRUE MION, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
SUITE 800  
WASHINGTON, DC 20037

EXAMINER
----------

WOLDEMARIAM, AKILILU K

ART UNIT	PAPER NUMBER
----------	--------------

2624

MAIL DATE	DELIVERY MODE
-----------	---------------

10/16/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/718,694

**Applicant(s)**

OOSAWA, AKIRA

**Examiner**

Aklilu k. Woldemariam

**Art Unit**

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's amendment filed on August 17, 2007 has been entered. Claims 1-20 have been amended. Claims 21-25 have been added. Claims 1-25 are still pending with claims 1,7,13, 17 and 22 being an independent.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1, 4, 7, 10, 13, 15, 17, 19, 21, 22 and 25** are rejected under 35 U.S.C. 102(b) as being anticipated by Some et al., Some (U.S. Patent number 5, 841, 148).

**Regarding claim 1, Some discloses an image processing apparatus (see item 60, fig.2) equipped with an inter image calculating means for performing inter image calculations to derive differences between two images of a single subject to obtain a difference image that represents the differences between the two images (see item 86, fig.3, items 200, 202, 204, 206 and 208, fig.6 and column 4, lines 38-45), wherein process confirmation data representing whether an image has undergone image processes is attached to each of the two images (see column 15, lines 38-45), and image processing condition data representing image processing conditions are further attached to the images which have undergone image processes (see column 15, lines 38-45) the image processing apparatus further comprising a judgment means for judging whether the two images have**

**undergone image processes, based on the process confirmation data attached to each of the two images** (see column 4, lines 44-60, i.e., judgment means referred as to pixels specifying means); **and a correction means for correcting an image which has been judged to have undergone image processes** (see items 200, 202, 204, 206 and 208, fig.6 and column 4, lines 9-26 ), **to correct the image to a state equivalent to its original state prior to the image processes** (see items 200, 202, 204, 206 and 208, fig.6 and column 4, lines 9-26 and column 5, lines 4-19), **based on the image processing condition data attached thereto** (see column 15, lines 38-45); wherein the inter image calculation means performs the inter image calculation employing the corrected image, for the image which has been judged to have undergone image processes (see items 86, fig.3, items 200, 202, 204, 206 and 208, fig.6 and column 4, lines 28-32).

**Regarding claim 4, Some discloses an image processing apparatus** (see item 60, fig.2) **as defined in claim 1, further comprising a positional alignment means for aligning the positions of the two images so that structural components of the single subject substantially match** (see column 3, lines 60-61 and 62-64, column 5, lines 9-18); wherein the inter image calculation means performs the inter image calculation between the two images which have been positionally aligned (see column 4, lines 27-33).

**Regarding claim 7, Some discloses an image processing apparatus** (see item 60, fig.2) **equipped with an inter image calculating means for performing inter image calculations to derive differences between two images of a single subject**

Art Unit: 2624

to obtain a difference image that represents the differences between the two images (see item 86, fig.3 and item 200, fig.6 and column 4, lines 28-32), wherein process confirmation data representing whether an image has undergone image processes is attached to each of the two images (see column 15, lines 38-45); the image processing apparatus further comprising a judgment means for judging whether the two images have undergone image processes, based on the process confirmation data attached to each of the two images (see column 4, lines 44-60, i.e., judgment means referred as to pixels specifying means); and a correction means for correcting an image which has been judged to have undergone image processes (see item 200, fig.6, column 4, lines 9-26 and column 5, lines 4-19), to cause the image to approximate its original state prior to the image processes, based on typical image processing conditions of image processes which have been administered to the image (see item 200, fig.6, column 4, lines 9-26 and column 5, lines 4-19); wherein the inter image calculation means performs the inter image calculation employing the corrected image, for the image which has been judged to have undergone image processes (see item 86, fig.3, item 200, fig.6 and column 4, lines 28-32).

Regarding claim 10, Some discloses an image processing apparatus (see item 60, fig.2) as defined in claim 7, further comprising a positional alignment means for aligning the positions of the two images so that structural components of the single subject substantially match (see column 5, lines 9-18 and 20-26); wherein the inter image calculation means performs the inter image calculation

**between the two images which have been positionally aligned** (see column 4, lines 27-33, column 5, lines 9-18 and 20-26).

**Regarding claim 13, Some discloses an image processing apparatus** (see item 60, fig.2) **equipped with an inter image calculating means for performing inter image calculations to derive differences between two images of a single subject to obtain a difference image that represents the differences between the two images** (see items 86, fig.3 and item 200, fig.6 and column 4, lines 28-32), **wherein process confirmation data representing whether an image has undergone image processes is attached to each of the two images** (see column 15, lines 38-45), **and image processing condition data representing image processing conditions are further attached to the images which have undergone image processes** (see column 15, lines 38-45); **the image processing apparatus** (see item 60, fig.2) **further comprising a judgment means for judging whether the two images have undergone image processes, based on the process confirmation data attached to each of the two images** (see column 4, lines 44-60, i.e., judgment means referred as to pixels specifying means); **and a correction means for correcting the difference image to be obtained by the inter image calculation in the case that at least one of the two images have undergone image processes** (see items 200, 202, 204, 206 and 208, fig.6 and column 4, lines 9-26 and column 5, lines 4-19), **to obtain a difference image which would be obtained if the inter image calculation was performed employing the two images prior to the image**

Art Unit: 2624

**processes** (see column 4, lines 9-26 and column 5, lines 4-19), **based on the image processing condition data attached thereto** (see column 15, lines 38-45).

**Regarding claim 15, Some discloses an image processing apparatus** (see item 60, fig.2) **as defined in claim 13, further comprising a positional alignment means for aligning the positions of the two images so that structural components of the single subject substantially match** (see column 5, lines 9-18 and 20-26); **wherein the inter image calculation means performs the inter image calculation between the two images which have been positionally aligned** (see column 4, lines 27-33 and column 5, lines 9-18 and 20-26).

**Regarding claim 17, Some discloses an image processing apparatus** (see item 60, fig.2) **equipped with an inter image calculating means for performing inter image calculations to derive differences between two images of a single subject to obtain a difference image that represents the differences between the two images** (see item 86, fig.3 and items 200, 202, 204, 206 and 208; fig.6 and column 4, lines 28-32), **wherein process confirmation data representing whether an image has undergone image processes is attached to each of the two images** (see column 15, lines 38-45), **and image processing condition data representing image processing conditions are further attached to the images which have undergone image processes** (see column 15, lines 38-45); **the image processing apparatus** (see item 60, fig.2) **further comprising a judgment means for judging whether the two images have undergone image processes, based on the process confirmation data attached to each of the two images** (see column 4, lines 44-60,

i.e., judgment means referred as to pixels specifying means); and a **correction means for correcting the difference image to be obtained by the inter image calculation in the case that at least one of the two images are judged to have undergone image processes** (see items 200, 202, 204, 206 and 208, fig.6 and column 4, lines 9-26 and column 5, lines 4-19), **to obtain a difference image approximating that which would be obtained if the inter image calculation was performed employing the two images prior to the image processes** (see items 200, 202, 204, 206 and 208, fig.6), **based on typical image processing conditions of the image processes administered to the at least one of the two images** (see items 200, 202, 204, 206 and 208, fig.6).

**Regarding claim 19, Some discloses an image processing apparatus** (see item 60, fig.2) **as defined in claim 17, further comprising a positional alignment means for aligning the positions of the two images so that structural components of the single subject substantially match** (see column 5, lines 9-18 and 20-26); **wherein the inter image calculation means performs the inter image calculation between the two images which have been positionally aligned** (see column 4, lines 27-33 and column 5, lines 9-18 and 20-26).

**Regarding claim 21, Some discloses an image processing apparatus** (see item 60, fig.2) **as defined in claim 1, wherein the process confirmation data** (see column 15, lines 38-45) **and image processing conditions are attached to each of the two images as parameters written into a header portion of each of the two images.**



**Regarding claim 22, Some discloses a method for deriving the differences between two images of a single subject to obtain a difference image that represents the differences between the two images (see item 86, fig.6 and items 200, 202, 204, 206 and 208, fig.6 and column 4, lines 28-32), the method comprising judging whether the two images have undergone image processing, based on process confirmation data attached to each of the two images (see column 4, lines 44-60, i.e., judgment means referred as to pixels specifying means); correcting an image which has been judged to have undergone image processing to correct the image to a state equivalent to its original state prior to the image processing (see items 200, 202, 204, 206 and 208, fig.6 and column 4, lines 9-26 and column 5, lines 4-19), based on image processing condition data attached thereto (see column 15, lines 38-45); and performing an inter image calculation employing the corrected image for the image which has been judged to have undergone image processing (see column 15, lines 38-45); wherein the process confirmation data represents whether an image has undergone image processing (see column 15, lines 38-45), and is attached to each of the two images(see column 15, lines 38-45), and the image processing condition data represents image processing conditions (see items 60 and 64, fig.2), and are further attached to the images which have undergone image processing (see column 15, lines 38-45).**

**Regarding claim 25, Some discloses a method for deriving the differences between two images as defined in claim 22, wherein the performing inter image calculation (see item 86, fig.3 and items 200, 202, 204, 206 and 208, fig.8 and column**

Art Unit: 2624

4, lines 28-32) **comprises aligning the positions of the two images so that structural components of the single subject substantially match** (see column 5, lines 9-18 and 20-26); **wherein the inter image calculation is performed between the two images which have been positionally aligned** (see column 4, lines 28-32 and column 5, lines 9-18 and 20-26).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 2,3, 5, 6, 8, 9, 11, 12, 14, 16, 18, 20, 23 and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Some, as applied to claims 1, 7, 13, 17 and 22, above in view of Yanagita et al., Yanagita (U.S. Patent 6, 415, 049 B1).

**Regarding claims 2, 8, 14, 18 and 23, Some discloses an image processing apparatus as defined as in claims 1, 7, 13, 17 and 22.**

Some does not disclose **the image gradation process.**

However, Yanagita discloses **the image process include a gradation process** (see item 26, fig.4, fig.8c, 12 and 14c, and column 3, lines 1-8 and column 17, lines 44-47).

It would have been obvious to someone of the ordinary skill in the art the time when the invention was made to use Yanagita's gradation process in Some's Image

Art Unit: 2624

processing apparatus because it will allow to correct the lowered sharpness,

[Yanagita's, see column 1, lines 37-38].

**Regarding claims 3, 9 and 24, Some discloses an image processing apparatus and method as defined as in claims 1, 7 and 22.**

Some doe not disclose **the image frequency process.**

However, Yanagita discloses **the image processes include a frequency process** (see fig.8c and 14 and column 18, lines 16-20).

It would have been obvious to someone of the ordinary skill in the art the time when the invention was made to use Yanagita's gradation process in Some's Image processing apparatus because it will allow to correct the lowered sharpness, [Yanagita's, see column 1, lines 37-38].

**Regarding claim 5, Some discloses an image processing apparatus (see item 60, fig.2) as defined in claim 2, further comprising a positional alignment means for aligning the positions of the two images so that structural components of the single subject substantially match (see column 5, lines 9-18 and 20-26); wherein the inter image calculation means performs the inter image calculation between the two images which have been positionally aligned (see column 4, lines 27-33 and column 5, lines 9-18).**

**Regarding claim 6, Some discloses an image processing apparatus (see item 60, fig.2) as defined in claim 3, further comprising a positional alignment means for aligning the positions of the two images so that structural components of the single subject substantially match (see column 3, lines 60-61 and 62-64 and column**

Art Unit: 2624

5, lines 9-18); wherein the inter image calculation means performs the inter image calculation between the two images which have been positionally aligned (see column 4, lines 27-33, column 5, lines 9-18 and 20-26).

Regarding claim 11, Some discloses an image processing apparatus (see item 60, fig.2) as defined in claim 8, further comprising a positional alignment means for aligning the positions of the two images so that structural components of the single subject substantially match (see column 5, lines 9-18 and 20-26); wherein the inter image calculation means performs the inter image calculation between the two images which have been positionally aligned (see column 4, lines 27-33, column 5, lines 9-18 and 20-26).

Regarding claim 12, Some discloses an image processing apparatus (see item 60, fig.2) as defined in claim 9, further comprising a positional alignment means for aligning the positions of the two images so that structural components of the single subject substantially match (see column 5, lines 9-18 and 20-26); wherein the inter image calculation means performs the inter image calculation between the two images which have been positionally aligned (see column 4, lines 27-33 and column 5, lines 9-18 and 20-26).

Regarding claim 16, Some discloses an image processing apparatus (see item 60, fig.2) as defined in claim 14, further comprising a positional alignment means for aligning the positions of the two images so that structural components of the single subject substantially match (see column 5, lines 9-18 and 20-26); wherein the inter image calculation means performs the inter image calculation

**between the two images which have been positionally aligned** (see column 4, lines 27-33 and column 5, lines 9-18 and 20-26).

**Regarding claim 20**, Some discloses an **image processing apparatus** (see item 60, fig.2) **as defined in claim 18**, further comprising a **positional alignment means for aligning the positions of the two images so that structural components of the single subject substantially match** (see column 5, lines 9-18 and 20-26); **wherein the inter image calculation means performs the inter image calculation between the two images which have been positionally aligned** (see column 4, lines 27-33, column 5, lines 9-18 and 20-26).

### **Response to Arguments**

6. Applicant's arguments filed August 17, 2007 have been respectfully considered, but they are not persuasive.

**Regarding 35 U.S.C 103 rejection of claims 2, 8, 9, 14 and 18**, the applicant's argued that with reference (Yanagita) does not disclose. The examiner disagrees because Yanagita discloses **the image process includes a gradation process** (see item 26, fig.4, fig.8c, 12 and 14c, and column 3, lines 1-8 and column 17, lines 44-47) and **the image processes include a frequency process** (see fig.8c and 14 and column 18, lines 16-20).

### **Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aklilu k. Woldemariam whose telephone number is 571-

Art Unit: 2624

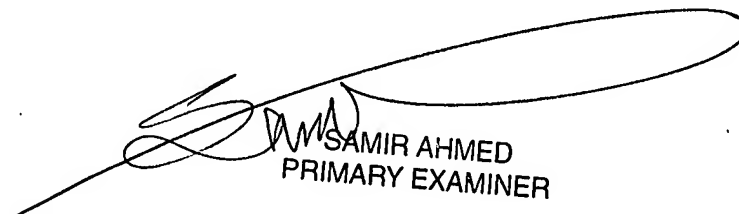
270-3247. The examiner can normally be reached on Monday-Thursday 6:30 a.m-5:00 p.m EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached on 571-272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Samir Ahmed  
SPE  
Art Unit 2624

A.W.  
10/01/2007



SAMIR AHMED  
PRIMARY EXAMINER